

Title: Dose Assessment at a Radioactive Disposal Site in Enewetak Atoll

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Abstract:

DOSE ASSESSMENT AT A RADIOACTIVE DISPOSAL SITE IN ENEWETAK ATOLL W.L. Robison,* V.E. Noshkin, Health and Ecological Assessment Division, P.O. Box 808, L286, Livermore, CA 94551-0808, USA

A radiological cleanup of Enewetak Atoll, where 43 nuclear tests were conducted by the United States between 1948 and 1958, began in 1977 and ended in 1980. Contaminated soils were removed from some islands and placed in and above Cactus crater, formed by an explosion in 1958. The material above ground was mixed with concrete and formed in the shape of a dome. A concrete cap was eventually constructed over the dome. A National Academy of Sciences committee examined the containment structure and suggested that at least part of the radioactivity contained in the structure was available for transport to the groundwater and subsequently to the lagoon and it was important to determine whether this pathway may be a significant one. An assessment of the radiological dose, from transuranium elements and other radionuclides in edible parts of marine resources from the vicinity of the crater is presented for periods of time before cleanup, during construction, 1-4 years after construction, and 13-15 years after completion of the disposal site. In no period does there appear to be a contribution of any additional dose to individuals that can be attributed to leakage of radionuclides from the disposal site.

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